

REMARKS

Claims 1, 2, and 4 have been amended, and claim 3 cancelled.

Claim 1 was amended to incorporate the subject matter of original claim 3 and to recite sintering “at 1100 degrees centigrade or more” as supported by page 8, line 1.

Moreover, claims 1 and 2 are amended to recite “an oxide ceramic core” and “oxide ceramics reinforcing liquid” as supported by the numerous examples throughout the specification of oxide compounds: for example, page 5, lines 26 recites “zircon powder or silica powder” (both zircon and silica are oxides) for use in the powder lamination step; and page 6, line 22 to page 8, line 14 recite oxides for the reinforcing liquid.

Claim 4 is amended to recite a “super-alloy precision cast product” as supported by, e.g., page 1, lines 13-17.

The present amendment adds no new matter to the application.

The Rejections

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Vail (Ceramic Structures by Selective Laser Sintering of Microencapsulated, Finely Divided Ceramic Materials, 1992).

Claim 3 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the Vail article in view of Osawa (U.S. Patent 5,702,501).

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the Vail article in view of Langer (U.S. Patent 6,155,331).

In view of the present amendment, Applicants respectfully traverse the present rejections and request reconsideration and allowance of the claims for the following reasons.

Applicant's Arguments

Regarding the rejection of claim 1, Vail teaches a selective laser sintering process to realize strengths (Abstract). The prior art fails to teach “sintering the impregnated ceramic core in an atmosphere at 1100 degrees centigrade or more” as recited by amended claim 1. As taught by the present specification, sintering at 1100 degrees centigrade or more advantageously results in a material with high heat resistance (page 8, lines 1-2). Vail instead teaches laser sintering before impregnation, at air and bed temperatures below 100 °C (Table 5). Furthermore, after infiltration (analogous to the impregnation claimed in the present invention), Vail fires at no more than 400 °C to remove moisture, but not to sinter (page 126, post-processing). Thus, the claimed sintering at 1100 degrees or more is not present in the prior art. Moreover, there would be no motivation to sinter at a higher temperature because doing so would take more energy than a lower temperature. Because Vail fails to teach the elements of “sintering the impregnated ceramic core” and of sintering “in atmosphere at 1100 degrees centigrade or more,” both found in the sole independent claim, Applicants respectfully traverse the rejections under § 102 and request reconsideration and withdrawal thereof.

Osawa “is directed to a clayish composition for producing a molded article of noble metal” (col. 3, lines 10-11) which is far removed from the present invention directed to a heat-resistant ceramic core. Thus Osawa is not combinable for any rejection under § 103.

Regarding dependent claims 2 and 4, the claims are allowable as dependent claims containing all of the limitations of claim 1, which is allowable for the reasons discussed above. Specifically regarding claim 4, the prior art also fails to disclose “super-alloy precision cast product” as recited by the amended claim, thus rendering the claim further patentable.

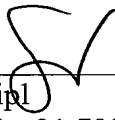
Conclusion

For all of the above reasons, claims 1, 2, and 4 are now in condition for allowance. Therefore, Applicants respectfully request reconsideration of the application and withdrawal of the rejections, and a prompt notice of allowance is earnestly solicited.

Questions are welcomed by the below signed attorney for the Applicants.

Respectfully submitted,

GRIFFIN & SZIPL, P.C.



Joerg-Uwe Szipl
Registration No. 31,799

Griffin & Szipl, P.C.
Suite PH-1
2300 Ninth Street, South
Arlington, VA 22204

Telephone: (703) 979-5700
Facsimile: (703) 979-7429
Email: GandS@szipl.com
Customer No.: 24203